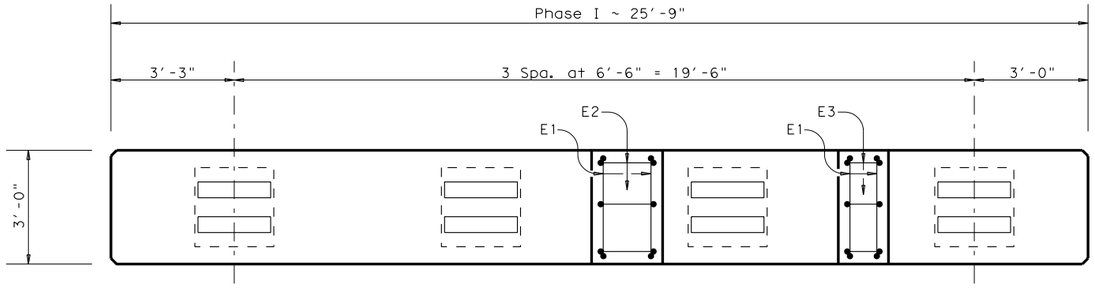
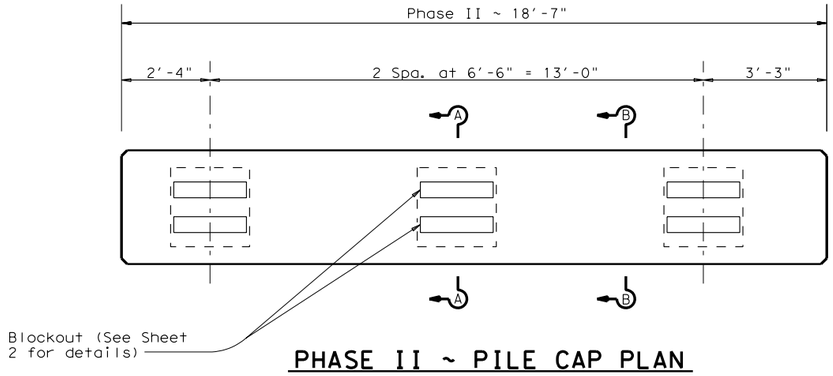
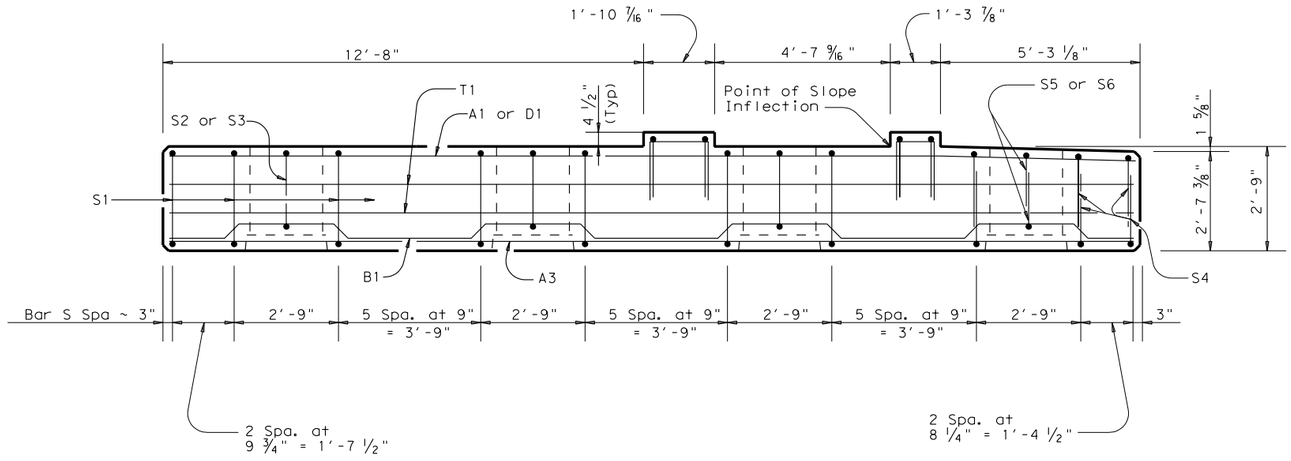


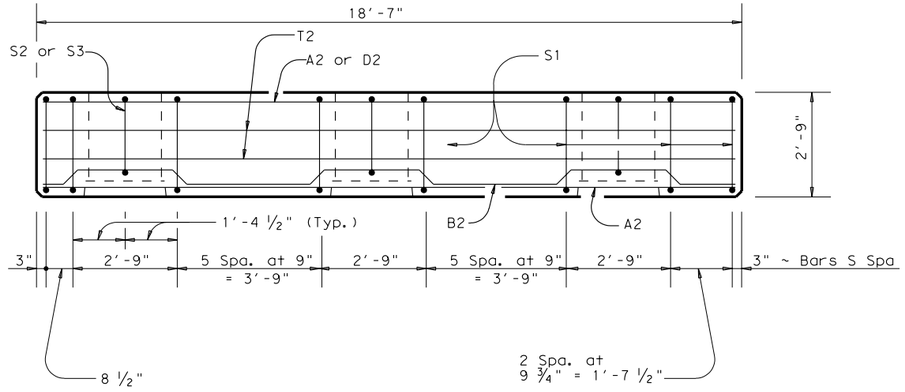
PHASE I ~ PILE CAP PLAN



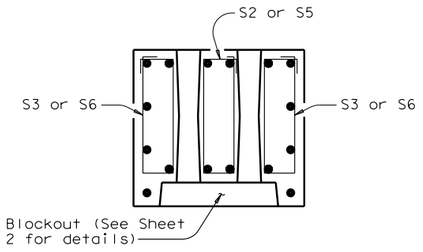
PHASE II ~ PILE CAP PLAN



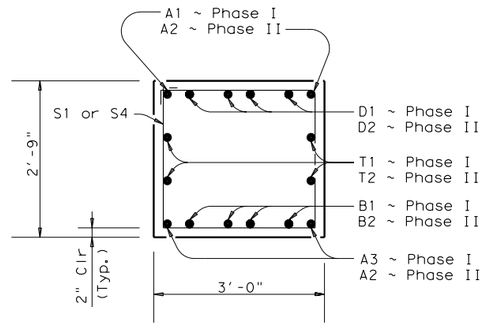
PHASE I ~ PILE CAP ELEVATION



PHASE II ~ PILE CAP ELEVATION



SECTION A-A



SECTION B-B

HS20 LOADING SHEET 1 of 3

Texas Department of Transportation
Bridge Division

PRECAST BENT CAPS

REDFISH BAY AND MORRIS & CUMMINGS CUT BRIDGES

FILE: redfishprecast.dgn	DN: WBO	CK:	DW: BSL	CK: MDH		
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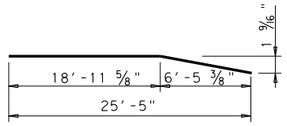
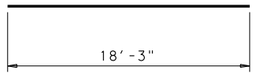
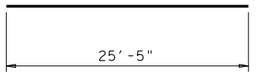
REVISIONS	CRP	BR 92(37)				
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	NUECES		2263	02	056	SH 361



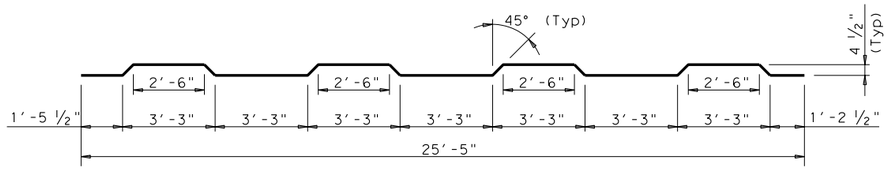
BARS A1 & D1



BARS A2, D2, & T2



BARS A3 & T1



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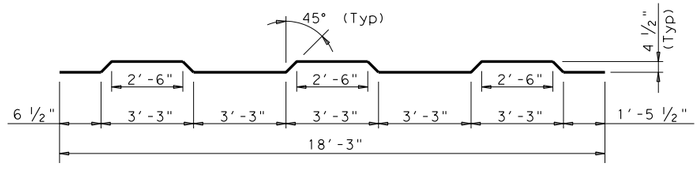

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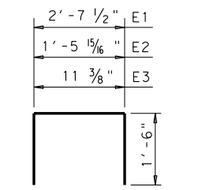
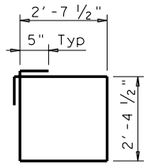
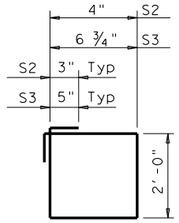


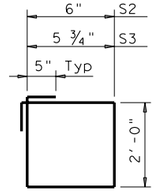
BARS E1, E2, & E3



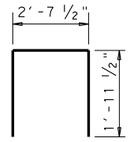
BARS S1



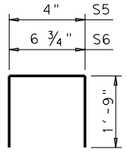
25" BLOCKOUT
BARS S2 & S3



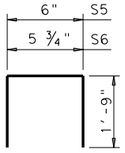
27" BLOCKOUT
BARS S2 & S3



BARS S4



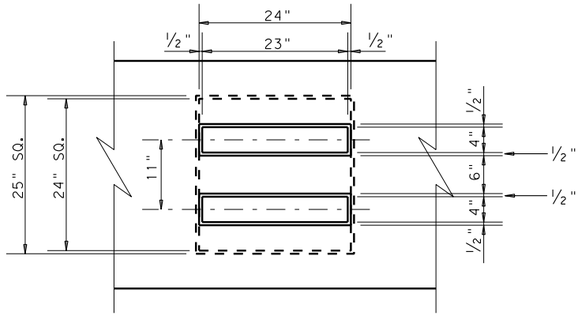
25" BLOCKOUT
BARS S5 & S6



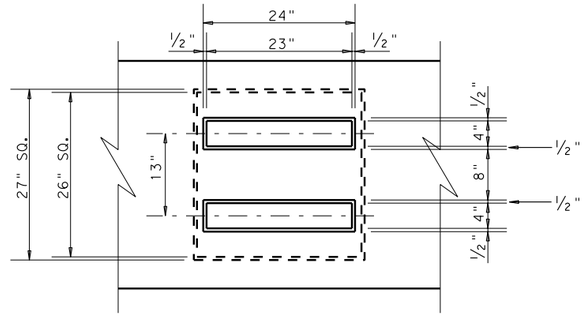
27" BLOCKOUT
BARS S5 & S6

BAR TABLE	
Bar	Size
A	#9
B	#6
D	#7
E	#5
S	#5
T	#5

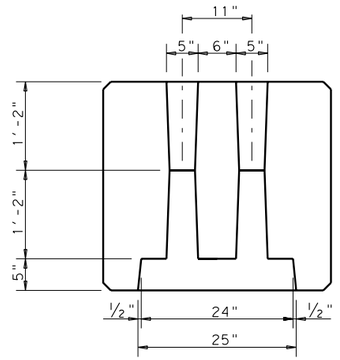
All reinforcing shall be epoxy coated.



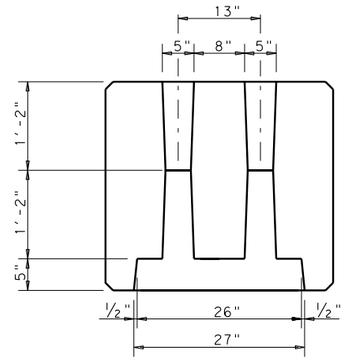
PLAN



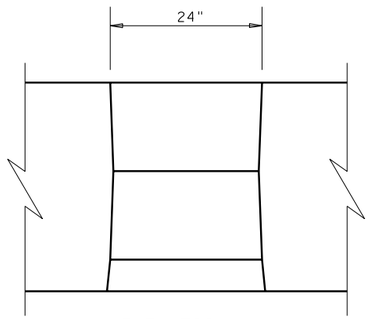
PLAN



SECTION



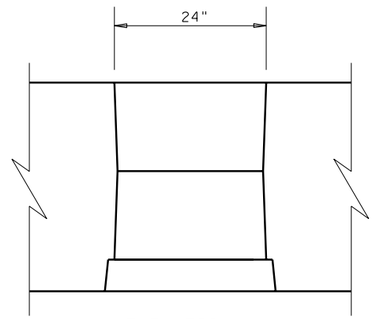
SECTION



ELEVATION

DETAIL ~ 25" BLOCKOUT

(To be used at bents with 18" piles)



ELEVATION

DETAIL ~ 27" BLOCKOUT

(To be used at bents with 20" piles)

HS20 LOADING SHEET 2 of 3

Texas Department of Transportation
Bridge Division

PRECAST BENT CAPS

REDFISH BAY AND MORRIS & CUMMINGS CUT BRIDGES

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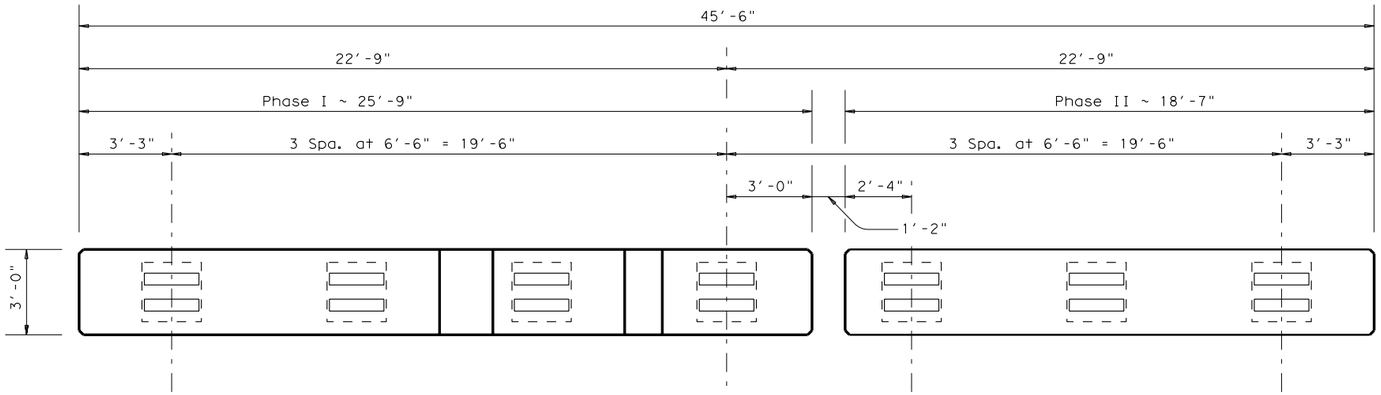
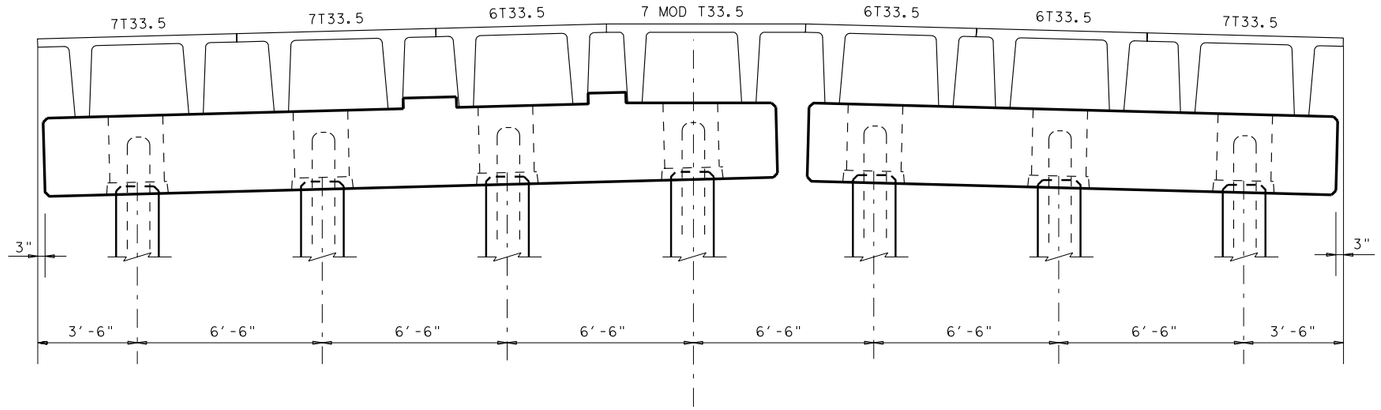
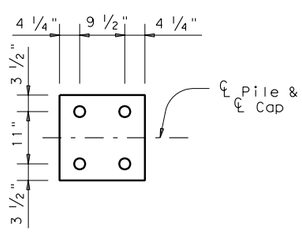
REVISIONS	CRP	BR 92(37)				
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	NUECES		2263	02	056	SH 361



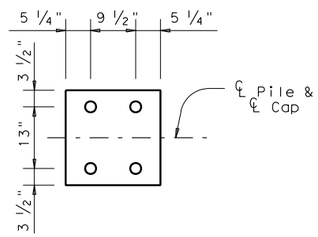
PLAN



ELEVATION

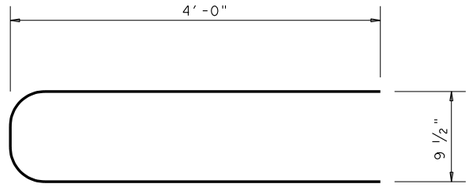


18" SQUARE PILE



20" SQUARE PILE

PLAN OF SLEEVE LOCATIONS IN PILES



ANCHOR DOWELS ~ BARS U

#7 Grade 60 Epoxy-Coated Reinforcing

INTENT AND PURPOSE OF SUBSTITUTION

Drawings and notes prepared and presented on sheets 1 through 3 titled Precast Bent Caps were designed and prepared for submission as a request to substitute(sub) elements to be incorporated into the construction of the bridges set out in Texas Department of Transportation (TxDOT) Federal Aid Project No. CRP 89 (216) BRM (Project). The elements of the bridges to be modified and the modifications shown on these drawings are as follows:

1. Piles ~ Precast, Prestressed Concrete Piles shall conform to requirements set on project sheet no. 61. Each pile in the bridge shall receive 4 - 1 ½" ø x 3′-0" Corrugated Galvanized Steel Sleeves at the locations shown. The sleeves are to provide for installation of Anchor Dowels to caps at each pile. Each leg of dowels shall extend 24 in. into piles, and bonded with epoxy grout. All piles shall be cast with the head of pile chamfer of 2 in. (to eliminate driving impact on the "cover concrete"). Precast pile lengths shall be adjusted to compensate for design embedment of 3" into cap.

2. Pile Caps ~ Precast Pile Caps shall be provided to replace the cast in place caps set out and detailed on project sheets 34,35, and 47. The precast caps shall match or exceed the structural characteristics of the caps in the project drawings. The caps for the four pile bents supporting Phase I of the construction shall be separate from the caps for the three pile bents supporting Phase II. The caps shall be anchored to the piles. Anchors shall be bound into the pile caps with Portland Cement Concrete which meets or exceeds the strength requirements for concrete for the caps as set out on project sheets 34,35, and 47. The concrete for setting the caps shall also comply with requirements for cement content and shrinkage control as set out in note 3 below.

3. Concrete for Setting Caps ~ Concrete for bonding caps to piles shall comply with TxDOT requirements for Concrete for Caps. The batch design shall further comply with the following requirements:
   - fc = 4000 psi at 48 hours
   - Shrinkage not to exceed 0.1%
   - Cement content not less than 8 sacks per CY
   - ¾" maximum aggregate size

4. Prestressed Concrete T Beams ~ T Beams shall comply with TxDOT as set out on project drawings sheet 53. The 6T33.5's as shown on sheets 36,37,48, and 49 at the south edge of Phase I will be replaced by 7 Modified T33.5's as shown on sheet 3 to facilitate installation of the temporary traffic barrier. The 8T33.5's at the south edge of Phase II will be replaced by 7T33.5's to maintain the designed bridge width. All T Beams shall comply to the concrete and reinforcing requirements as shown on project sheet 53.

Texas Department of Transportation
Bridge Division

PRECAST BENT CAPS

REDFISH BAY AND MORRIS & CUMMINGS CUT BRIDGES

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REVISIONS	CRP	BR 92(37)		
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	NUECES	2263	02	056	SH 361